

# Foreign Agricultural Service

GAIN Report

Global Agriculture Information Network

Required Report - public distribution

GAIN Report #IS3001

Date: 1/27/2003

**Israel** 

**Grain and Feed** 

**Annual** 

2003

Approved by:

Asif Chaudhry U.S. Embassy

Prepared by: Yossi Barak

### **Report Highlights:**

Israel is totally dependent on imports of its grain and feed needs. Total food and feed grain imports in MY2001 amounted to more than 4.2 million tons. United States market share in MY2001 has decreased by 5.5 percent from that in previous year. Consumption in MY2002 is expected to remain at its 2001 level but U.S. market share is expected to decrease more.

Summary	. <u>Page 2 of 16</u>
Wheat Production	. Page 4 of 16
Farm Gate Price	. Page 4 of 16
Production Policy	. Page 4 of 16
Varieties	. Page 4 of 16
Outlook for MY2003	. Page 5 of 16
Consumption	. Page 5 of 16
Ending Stocks	. Page 5 of 16
The Palestinian Authority	. Page 5 of 16
Black Sea Competition	. Page 5 of 16
Table 1. Prices of Grains to Israeli Feed Mills	. Page 6 of 16
The broiler Industry	. Page 6 of 16
Table 2. Per Capita Consumption of Broiler Meat	. Page 7 of 16
Table 3. Index of Consumer Prices for Broilers	. Page 8 of 16
The Dairy Industry	. Page 9 of 16
The Beef Cattle Industry	. Page 9 of 16
Trade	. Page 9 of 16
Trade Policy	. Page 9 of 16
Barley Production	Page 10 of 16
Consumption	
Trade	Page 11 of 16
Trade Policy	Page 11 of 16
Production of Corn	Page 11 of 16
Corn Consumption	Page 12 of 16
Trade	Page 13 of 16
GMO Corn and High Oil Corn	Page 13 of 16
Sorghum Production	Page 14 of 16
Consumption	Page 14 of 16
Trade	Page 15 of 16
Table 4. Total Imports of Bulk Agricultural Products	Page 15 of 16
Table 5 Total Imports of Rulk Agricultural Products -	Page 16 of 16

## **Summary**

Israel is totally depended in imports of its grain and feed needs. Only wheat for milling is ordinarily planted domestically, usually supplying between 15 and 18 percent of almost one million mt consumed, annually. Total food and feed grain imports in MY2001 (October 2001 to September 2002) amounted to more than 4.2 million mt, of which 2.6 million mt were feed and grains. United States market share in My 2001 is down by 5.5 percent from that in the previous year and by 16 percent of that in MY1999. The American market share is affected, usually by two contrasting phenomena: imports of feed grains from new origins, mainly from the Black Sea basin, (BSb) and Israel's successive droughts (the winters in crop years 2001 and 2002 were rainy). The fluctuations in the U.S. market share are caused by the Israeli feed mills' high price sensitivity, and their ability to easily shift from one source to another. MY2001, for the first time in last few years, saw no imports of feed grains from South America. Due to good harvest in the Ukraine and Russia, expanded shipments of feed wheat and corn from there entered Israel. The outlook for MY2002 is for continuous expanded imports of feed wheat and corn from the (Bsb) and of soybeans and corn from South America. Furthermore, it is expected that Israeli traders will try to diversify their sources for milling wheat on the account of shipments from the United States. Despite the new sources form milling what, American HRW is expected to retain its high percentage of market share. Medium and long term forecasts indicate that Israeli importers consider East European countries a natural, convenient and profitable source for feed grains, mainly feed wheat and corn. Argentina and Brazil are also gaining grounds mainly as suppliers of corn and soybeans. Total MY2002 consumption of the main grains: wheat, corn, barley and sorghum, is forecast to remain at the MY2001 level, as a consequence of the political situation in the region and the deepening economic recession in Israel which has already affected the standard of living of both Israeli and Palestinians. Due to expectation for a further deepening of the recession, consumption of grain is expected to decrease by at least 2 percent in MY2003. Local wheat production in the 2001/2002 crop year totaled 175 tmt, of which 160 tmt were marketed through official channels. Crop year 2002/3 started with dry and hot weather, which dried out the early planted fields. Most of these fields were replanted. At the time of writing this reports (December 2002), the condition of wheat fields look promising after sufficient rains in December. The predicted yield, is expected to be 170 to 180 tmt.

Trade Matrix tables were not added since the figures published by the Central Bureau of Statistics (CBS) are based on custom entries, submitted by traders, of which many are located in Europe. Therefore the CBS figures show much higher market share for European countries than it is in reality.

PSD Table						
Country	Israel					
Commodity	Wheat					
		2001		2002		2003
	Old	New	Old	New	Old	New
Market Year Begin		7/2001		7/2002		7/2003
Area Harvested	60	75	80	75	0	75
Beginning Stocks	175	170	175	250	0	280
Production	135	135	180	175	0	170
TOTAL Mkt Yr. Imports	1500	1475	1500	1605	0	1520
July-June Imports	1500	1475	1500	1605	0	1520
July-June Imports U.S.	750	640	735	650	0	655
TOTAL SUPPLY	1810	1780	1855	2030	0	1970
TOTAL Mkt. Yr. Exports	0	0	0	0	0	0
July-June Exports	0	0	0	0	0	0
Feed Dom. Consumption	850	657	900	800	0	700
TOTAL Dom. Consumption	1635	1530	1680	1750	0	1670
Ending Stocks	175	250	175	280	0	300
TOTAL DISTRIBUTION	1810	1780	1855	2030	0	1970

#### **Wheat Production**

In crop year 2002 (October 2001 - September 2002), 65,000 hectares were planted for commercial wheat production and between 10,000 and 15,000 hectares were planted under substance agriculture conditions, mainly by the Bedouins of Israel's Negev region. Out of the 65,000 hectares, 35,000 hectares were planted in the Negev, the southern part of Israel, 10,000 hectares were planted in the Lakhish region (northern Negev), another 13,000 in the inner valleys of the north (Jezreel and Beit Shean). The rest were divided between the Golan and the Western Galilee. In the past, thirty percent of the wheat area were partially irrigated but due to water shortage none of the wheat is irrigated any more.

Crop year 2001 was the first with favorable rainfall, after five years of droughts. In crop years 1996 to 2000 the wheat suffered droughts. Crop year 2001 saw sufficient precipitation in most regions but the seasonal distribution was poor. The reported year (crop year 2002) showed

10 percent higher than multi annual average precipitation. The winter of 2001/02 was characterized by heavy rains during October and November 2001, relatively dry winter months and higher than average rains during the late spring. Production totaled 175 tmt, of which 160 tmt were delivered through the organized marketing system and 15 tmt were marketed through unofficial channels. Out of total production, 130 tmt were sold to feed millers, 30 tmt were added to the emergency stocks and 15 tmt were retained as seed. Average hectoliter weight was 81, 4.5 points higher than in the previous year (76.5). Protein level was less than 10 percent for 10 percent of the harvested and 11.5 percent for the rest. For the first time problems with the Gluten Quality were observed. It is attributed to the Wheat Bug, which became a significant pest in the wheat fields in recent years.

#### **Farm Gate Price**

The price for the farmers is based on the CBOT price at harvest time. Freight and handling cost is added to the basic price, in order to equalize the prices of local and imported wheat. A premium is paid on high protein. The average base price, in the summer of 2002, for what delivered to the storage was \$142.36 per ton, with a rebate of 1.0 percent. The average premium for protein was \$6.49/mt for each percent above 12 percent. The premium for low humidity and quality (cleanness and breakage) stood at\$0.50 per ton. Finally, due to relatively low quality, the total average delivered price reached \$141 per one metric ton. The low quality is a consequence of flooding away of the Nitrogen in the soil in the northern and central parts of the country and stoppage of rains between 2/12/02 and 3/27/02 which prevented addition of nitrogen in the spring.

#### **Production Policy**

See details in reports IS2001

#### **Varieties**

The popular varieties are of hard wheat adapted to specific Israeli climate and soil conditions. The most popular types planted in the 2002 season were: Negev, Galil, Ariel and Beit Ha'Shita, all produced by the "HaZera" company. They represent 70 percent of the planted area. The rest is planted with Nirim and Gedera varieties, produced by "Gedera Seeds Company."

#### **Outlook for MY2003**

approximately eighty thousand hectares were planted in crop year 2003, of which 65,000 are in the commercial sector and 10 to 15 thousand were planted in the Bedouim substance sector. Some rains at the beginning of November caused early germination which later dried out due to prolong absence of precipitation and extremely high temperatures during the rest of November 2002. Approximately 60 percent of the dried fields in the Negev, which were in worst condition were ploughed and replanted. The precipitation during December 2002 is quite high and germination of the replanted area looks good. The planted area to wheat in the north and central parts of the country look also good and if rains continue as forecasted it gives hope for a harvest of approximately 170 thousand metric tons of good quality wheat.

## Consumption

Wheat is consumed by the milling industry and the livestock sector, mainly poultry. Annual consumption, which totaled in MY2001 1.53 million tons is expected to expand by 14 percent by the end of MY2002. Close to one million tons is milling wheat for human consumption and the rest is consumed by the livestock sector. The milling industry consumes high quality HRW wheat which until two years ago between 85 and 88 percent of it was imported from the United States. In the last two years the U.S. market share dropped to 78 percent (-12 percent). Feed wheat is consumed mainly bye the poultry sector. Since the Israeli feed milling industry is highly price oriented and due to the fact that Israeli nutritionists have succeeded in utilization of feed what for poultry by using enzymes, the Israeli feed milling industry shifts easily from corn to feed what and vice versa, according to changes in relative prices. Feed what imports which totaled 330 tmt in the marketing years 1999 and 2000, almost doubled in MY2001 (657tmt) and are expected to expand to another 22 percent to approximately 800 tmt in MY2002. All feed wheat is imported from Russia and Ukraine.

#### **Ending Stocks**

Due to the political tension in the region, the emergency stocks, which were in decline in recent years, were increased by the government to their level 5 years ago.

#### The Palestinian Authority

Wheat imports included, in the past all Palestinian consumption, which was estimated at 250-300 tmt. In recent years, the Palestinians have established alternative sources for part of their supply. It is predicted that the Palestinians, who at present buy a portion of their needs from Israeli importers, will try to increase their independent imports. In the past, until the 1993 economic Agreements between Israel and the Palestinian Authority (PA), most of the Palestinian needs were supplied by Israeli mills. Now, there are four state of the art flour mills in the PA, which are capable of satisfying the entire Palestinian demand. Israeli millers, now consider the PA a lost market.

#### **Black Sea Competition**

After many years of total domination of the market by American corn for feed and wheat for milling, sources for these grains are now more diversified. The Black Sea Basin in considered by many Israeli traders as "Natural" source for grains, due to it's proximity and the possibility to have small shipments, which save the need for expanded storage. Moreover, Ukraine and Russian exporters improved their

storage abilities and port facilities. This improved their grain which now compete with U.S. Grains. Significant use of feed what by Israeli feed millers, started in 1996 when production in the Black Sea Basin grew dramatically. Imports started with 250 tmt in CY 1996 and reached a high of 770 tmt in CY199, dropped to 460 tmt in CY2001 and will end with more than 700 tmt in CY2002. The growing demand for feed wheat is encouraged by very competitive Black Sea prices. The feed milling industry in Israel which is highly price oriented and highly sophisticated, has learned how to add enzymes to the mix and has introduced feed wheat into poultry diets to replace the more costly corn and sorghum as an energy source. CY2000 and CY2001 saw relatively reduced prices for U.S. corn and drought conditions in the Black Sea Basin reduced production. Therefore American corn returned to the Israeli poultry diet and feed what imports dropped to 550 tmt and 460 tmt, in accordance. Wheat crops in Russia and Ukraine in CY2001 and CY2002, were high and shipments of feed wheat grew. Lower feed what prices in late 2002 and expected levies on wheat imports to the EU, which will reduce shipments of Western Europe, can be expected to expand importation from the Black Sea Basin At the time of writing this report (late December 2002) the difference in price for American corn and feed wheat from Ukraine stands at \$25 per ton (it reached \$40 per ton at the peak, in mid October 2002). Imports of feed what in CY2003 are forecast at 700 to 757 tmt, mainly displacing corn. For the medium and long term, exporters can expect fluctuation in their quantities of each feed grain imported by Israel in correlation with the price rations of the grains and their various sources.

Table 1. Prices of Grains to Israeli Feed Mills. \$/mt

				2002		
	1999	2000	2001	1 <sup>st</sup> half	2 <sup>nd</sup> half	
Feed Wheat	114	128	122	118	111	
Corn	119	124	122	120	135	
Sorghum	121	122	131	127	NA*	
Barely	107	132	129	123	118	

Source: Publication by the Feed Centers Forum.

\*Due to it's high price sorghum is not imported.

The demand for feed wheat and corn is derived from developments in the livestock and mainly in the poultry industry.

#### The broiler Industry

Production of broilers in CY2003 will exceed 330,000 metric tons, 10 percent higher than that in 2001. That increase happened despite the political unrest and deepening economic recession, which have decreased the general demand for food products, including livestock products. The increased production was absorbed by increasing storage of frozen broilers and by steep reduction of retail price for poultry products and as consequence of th farm gate price: at the time of writing this report farm

gate price was 30 percent was lower than the calculated target price. The budget submitted for fiscal year 2003 indicates a continuation and perhaps even a deepening of the economic recession. This situation occurs on the background of intensive construction of poultry houses during the last three years. The current expanded production is only 60 percent of the production capacity. It is expected to decrease more when production adjusts to consumption. Many growers, who loaned money for investment, are expected to go in to bankruptcy and to leave the industry. The described situation will affect the industry by two phenomena: (1) the number of registered growers, which now stands on between 800 and 900 (of which as 600 are active growers) is expected to decrease by another 400 or 450, mainly from the family sector. In the case the number of active growers is expected to decrease to between 300 and 400 growers. (2) The integration process, which has been under debate in Israel for many years, will finally start being implemented. For the medium and long term, production of broiler meat can be expected to grow slightly higher than the population growth, due to steady increase in per capita consumption.

Table 2. Per Capita Consumption of Broiler Meat

Calendar Year	Kg/capita
1994	27.1
1995	27.8
1996	27.5
1997	27.3
1988	28.1
1999	30.4
2000	32.2
2001	32.4
2002	35.0*

Source: 1994-2001 - Annual summaries by the Agricultural Center 2002 - estimation based on figures from the Poultry Board of Israel.

The increase in consumption, in recent years is explained by two main factors:

- 1. A continuous decline in broiler prices, in real terms, as shown in table 3
- 2. An increased variety of broiler products.

**Table 3. Index of Consumer Prices for Broilers** (1989=100):

Calendar Year	Index
1989	100.0
1990	91.2
1991	82.9
1992	85.1
1993	75.5
1994	75.1
1995	70.2
1996	72.1
1997	73.1
1998	69.4
1999	66.5
2000	64.6
2001	65.6
2002	61.6*

Source: Central Bureau of Statistics.

The reduction in real price for broilers is possible due to relatively decreased price for feed and the improved efficiency, which is a direct outcome of the increase in the size of production units: eight years ago, 4,000 growers produced 180,000 mt of broilers - an average of 45 mt per grower. In 2002, 550 active growers produced 335,000 tons. Thus, average production per unit has grown more than thirteen fold and reached 600 tons.

2. The second factor is the growing variety of further processed products offered to the Israeli consumer. It should be indicated that the U.S. organizations were involved in the introduction of boiler industry leaders to the advantages to be gained from introduction of further processed and branded product.

<sup>\*</sup> January - October 2002.

## The Dairy Industry

See details in report #IS2001

#### The Beef Cattle Industry

There is a growing demand for high quality fresh beef on the account of frozen beef from Latin America. The Kashrut laws (Jewish religious laws) prohibit import of non kosher beef. Therefore, feedlots have expanded in recent years, together with the imports of live calves for fattening. In CY2001 almost 100,000 calves were imported, mainly from Poland and Australia. In may 2002 imports from Poland were banned due to a few cases of BSE which were observed there. The MOA, in response to the increased demand for fresh beef and its objective to ensure additional income for the growers, encourages local fattening of calves. This provides an opportunity for increased consumption of feed grains by this sector.

#### **Trade**

Since 1997, the U.S. market share for milling wheat, which in previous years exceeded 85 percent, dropped to below 50 percent. Total quantity of milling wheat from the U.S. has not declined, but feed wheat imports expanded significantly. Its price, well below that of corn as an energy source, shorter transportation lines and enhanced logistic flexibility, derived from shipping by small vessels, make the Black Sea region a natural source for Israel for some grains, mainly feed wheat. Improved management, slow but steady introduction of modern machinery and growing techniques, makes the Black Sea region a serious competitor for American corn and sorghum. With respect tot feed grains, price will continue to be a major factor in Israeli importers' sourcing considerations. The picture is not the same with milling what, since quality, uniformity and consistency are main considerations for the milling industry and the millers' customers in the baking industry. The U.S. share of milling wheat can be expected to remain high, but not at it's present level.

#### **Trade Policy**

Former restrictions on sourcing of milling and feed wheat were abolished by the Israeli government after it joined the WTO. There is no duty on wheat imports. Imported grains must meet the standards of the Plant Protection Inspection Services of the MOA. The longstanding linkage of wheat imports to purchases of domestically grown wheat, which has been suspended because of the extended drought and consequent low domestic production, had been imposed again in CY2002.

PSD Table						
Country	Israel					
Commodity:	Barley					
		2001		2002		2003
	Old	New	Old	New	Old	New
Market Year Begin		6/2001		6/2002		6/2003
Area Harvested	5	5	10	10	0	5
Beginning Stocks	40	15	10	30	0	35
Production	5	5	10	8	0	5
TOTAL Mkt. Yr. Imports	400	434	500	470	0	450
June-May Imports	400	434	500	470	0	450
June-May Imports U.S.	0	0	0	0	0	0
TOTAL SUPPLY	445	454	520	508	0	490
TOTAL Mkt. Yr. Exports	0	0	0	0	0	0
June - May Exports	0	0	0	0	0	0
Feed Dom. Consumption	425	409	500	458	0	435
TOTAL Dom. Consumption	435	424	510	473	0	450
Ending Stocks	10	30	10	35	0	40
TOTAL DISTRIBUTION	445	454	520	508	0	490

Note: Marketing year for barely is June - May, as in USDA and U.S. Grains Council publications.

## **Barley Production**

Most barley was produced in Israel's Arab sector and in the PA, as feed for livestock (mainly sheep) and for seed. In recent years, due to cropping pattern considerations, some barley is planted also in the Jewish sector, but only for hay or silage. The Arab sector (mainly the Bedouin in the Negev area), who used to plant between 6 and 12 thousand hectares, depending on climatic conditions, have shifted to wheat in recent years. Crop year 2002 saw production of 8 tmt. It is expected that due to the low price for feed wheat, the planted area for barely in CY2003 will decrease by 50 percent and local production will reach 5,000 mt.

## Consumption

Barely is mainly consumed by cattle and other farm livestock. Until MY1999, imports of barley showed a rising trend: from 4000tmt in MY1996 to 580tmt in 1999. In MY2000 the trend changed due to a steep increase in prices. Consumption during MY20001 is estimated at approximately 420 tmt. In the following year consumption is expected to increase by 10 percent. The consumption of barely is expected to decrease by 5 percent in MY2003.

#### **Trade**

In recent years, barely is mainly imported from the Black Sea Basin, (Ukraine dn Bulgaria) and from North Europe. American barely is not competitive in the Israeli market.

#### **Trade Policy**

No tariff or non tariff barriers impede barley imports.

#### **Production of Corn**

Feed corn is not grown in Israel due to high water consumption in summer. Due to increasing water scarcity in Israel, planting of all summer crops (including some crops more profitable than feed corn, such as cotton, processing tomatoes and sweet corn) will be restricted even for those producers who can utilize recycled water. Annually, 5,500 ha of corn and planted for green forage and silage for the livestock industry. Another 5,500 to 7,000 of sweet corn is planted for fresh consumption and canning. Of this area, only a small consumption will be planted regularly in the future. Small amounts of sweet corn for canning will be planted only after a rainy winter when soil moisture will enable addition of just a small quantity of auxiliary irrigation water.

PSD Table						
Country:	Israel					
Commodity:	Corn					
		2001		2002		2003
	Old	New	Old	New	Old	New
Market Year Begin		10/2001		10/2002		10/2003
Area Harvested	0	0	0	0	0	0
Beginning Stocks	73	75	73	55	0	50
Production	0	0	0	0	0	0
TOTAL Mkt. Yr. Imports	1000	945	500	710	0	750
OctSept. Imports	1000	945	500	710	0	750
OctSept. Import U.S.	847	716	300	430	0	450
TOTAL SUPPLY	1073	1020	573	765	0	800
TOTAL Mkt. Yr. Exports	0	0	0	0	0	0
OctSept. Exports	0	0	0	0	0	0
Feed Dom. Consumption	900	875	400	640	0	670
TOTAL Dom. Consumption	1000	965	500	715	0	750
Ending Stocks	73	55	73	50	0	50
TOTAL DISTRIBUTION	1073	1020	573	765	0	800

#### **Corn Consumption**

Corn Consumption in MY2001 totaled 965 tmt, three percent lower than previous year. The reason for the high consumption in MY 2000 and MY2001, lies in the low yields of feed wheat in the Black Sea Basin as a result of two successive droughts and mainly in U.S. corn's low price, relative to the prices of sorghum and of feed wheat it's main competitors in poultry diets. MY2002 will see a decline of more than 25 percent in corn consumption, due to greater feed wheat availability in the Black Sea Basin and it's significantly lower price relation to corn. The quantity of imported corn in MY2000 and

MY2001 was very close to the maximum possible consumption levels. Despite the fact that corn is considered an excellent grain for poultry, its use in broiler rations in Israel is limited due to the Xantophy 1 pigmentation which turns the broiler meat yellow. Israeli consumers refuse to buy yellow chickens, since they relate to color to high fat content or poor health. Starch, corn flower and glucose producers have been purchasing 70 tmt of high quality corn per year from the U.S. Recently they increased their consumption by 10 to 15 tmt. Most of their produce is exported to European markets who now demand GMO free products and GMO labeling. Some U.S. suppliers were unable to supply GMO free corn at competitive prices and the producers considered shifting to other sources. Corn grits imports in MY2001 ended 20 percent lower than in previous year and more than 35 percent lower than two years ago. This is explained by increased use of low whole corn. Corn grits are consumed by the snack industry. All corn grits are imported from the EU, mainly from Germany. Corn gluten feed is imported solely from the U.S. and it used mainly by the cattle industry.

#### **Trade**

MY2000 saw an increased market share for American corn which displaced corn from Russia, Ukraine, Hungary and Romania. This is mainly due to lower U.S. prices. Spring and summer 2001 saw a longer than usual import season from Latin America and increased shipments of corn from Argentina and Brazil, U.S. market share, which reached 96 percent in MY1999, dropped steeply to 63 percent. The CIF Haifa price for South America corn was 8\$ to \$10/mt lower than the price for U.S. corn. Due to the financial crisis in Argentina, spring 2002 saw no imports of corn or any other grain from there. However, cheaper than the American, corn from Russia and the Ukraine replaced the Argentinean corn on the account of the corn from the United States. In the mid and long term, it is expected that South America, with its expanding planted area and its improving loading facilities will become a regular supplier of corn and soybeans to Israel, mainly during the late spring and early summer. Due to the anticipation for a change in relative prices between the feed wheat from the Black Sea region, MY2003 is expected to witness slightly higher corn imports. According to traders in Israel, the U. S. market share is expected to reduce slightly from it's current 68 percent level.

#### **GMO Corn and High Oil Corn**

Israel's has still not issued food labeling regulations with respect o imports and domestically produced products. A large proportion of domestic food processing is intended for the EU market where GMO contents are a matter of concern. Hence, in spite of a lack of any regulation preventing imports of GMOs in food or otherwise, Israeli importers are increasingly demanding GMO free products and raw materials for processing.

High oil corn was tested in the past, in poultry diets. It was found excellent as a feed compound but it's too high price did not justify it's inclusion in the poultry feed.

PSD Table						
Country:	Israel					
Commodity:	Sorghum					
		2001		2002		2003
	Old	New	Old	New	Old	New
Market Year Begin		10/2001		10/2002		10/2003
Area Harvested	0	0	0	0	0	0
Beginning Stock	13	8	8	5	0	5
Production	0	0	0	0	0	0
TOTAL Mkt. Yr. Imports	25	31	50	30	0	25
OctSept Imports	25	31	50	30	0	25
OctSept. Import U.S.	25	29	50	28	0	23
TOTAL SUPPLY	38	39	58	35	0	30
Total Mkt. Yr. Exports	0	0	0	0	0	0
OctSept. Exports	0	0	0	0	0	0
Feed Dom. Consumption	30	26	50	22	0	17
TOTAL Dom. Consumption	30	34	50	30	0	25
Ending Stocks	8	5	8	5	0	25
TOTAL DISTRIBUTION	38	39	58	35	0	30

# **Sorghum Production**

Sorghum has not been grown in Israel since the mid 70's, due to the high price of water and low profitability, considering alternative uses of water and land.

# Consumption

The millers are aware of sorghum's nutritional benefits but it has been completely removed from poultry diets on economic grounds. The difference in price between sorghum and corn or feed wheat is so high that the nutritionists do no even consider inclusion of sorghum in the diet. Sorghum imports in MY2000

totaled 167 tmt. MY2001 saw a decline fo more than 80 percent to 31 tmt. The anticipation for MY2002 is for the same volume. The millers keep a constant stock which varies between 8 tmt to 10 tmt, just for special orders. Thirty thousand tons will be imported in any case due to Jewish religious restrictions: sorghum is needed for feed production during Passover, as a substitute for feed wheat which is forbidden from 3 weeks prior to Passover until the end of the feast.

#### **Trade**

Due to its high price only small amount of sorghum is imported. When sorghum is imported, the U.S. is the only source.

Table 4. Total Imports of Bulk Agricultural Products

Thousand of metric tons

Calendar Year	1997	1998	1999	2000	2001	2002
Feed Grains						
Sorghum	518	71	143	206	55	27
Corn	548	623	723	790	1058	912
Corn grits	96	70	76	74	60	60
Corn gluten	81	76	98	116	139	138
Barley	359	480	582	340	373	480
Feed wheat	270	676	766	555	463	670
Oil meals	185	112	142	160	141	100
Misc. proteins	114	10	29	47	58	48
Rye & Oats	3	3	88	68	73	44
Rape & sunflower	48	39	76	68	43	50
Sub total feed grains	2222	2160	2723	2424	2463	2529
Milling wheat	804	884	816	805	836	810
Soybeans	583	517	657	549	628	620
Grand Total	3609	3561	4196	3923	3927	3959

Source: Ministry of Agriculture, Office of Prices and Supply

<sup>\*</sup>Jan-Nov: according to published figures. December 2002: according to information collected from importers.

Table 5. Total Imports of Bulk Agricultural Products -

U.S. Market Share % of total imports.

Calendar Year	1997	1998	1999	2000	2001	2002
Feed Grains						
Sorghum	97	92	96	91	98	93
Corn	79	18	59	99	52	85
Corn grits	0	0	0	0	5	25
Corn gluten	100	97	87	100	94	88
Barley	0	0	0	0	0	0
Feed wheat	0	0	0	2	6	0
Oil meals	10	21	27	39	39	32
Misc. proteins	48	0	21	57	72	65
Rye & Oats	0	0	0	0	0	0
Rape & sunflower	0	0	0	0	0	0
Sub total feed grains	49	13	24	49	35	40
Milling wheat	95	88	82	85	72	70
Soybeans	100	72	82	99	80	85
Grand total	67	40	44	65	50	54

Source: Based on data from Ministry of Agriculture, Office of Prices and Supply.